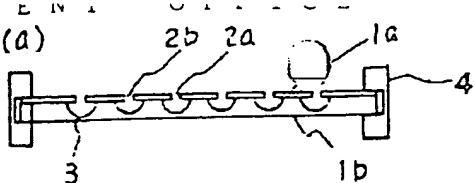


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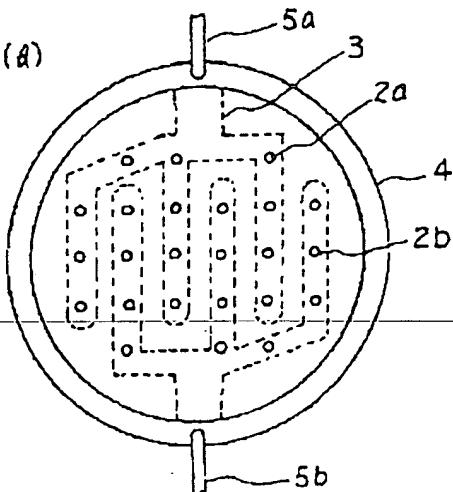


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 DATE : 10-08-1993 PAT: A 5090169
 PENTEE : HITACHI LTD
 PENT DATE: 09-04-1993

ENTOR : WATANABE KUNIHIKO; others: 03
 .CL. : H01L21/205; C23C16/50;
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FILE : GAS FEEDER, AND MICROWAVE PLASMA FILM FORMING DEVICE EQUIPPED WITH SAME



STRACT : PURPOSE: To provide the title gas feeder advantageous to the even film formation in large area even if highly reactive gasses are used by a method wherein multiple pores are made in the two joined quartz plates while the inner space of the pores is divided into multiple parts so as to feed respective gasses from independent gas controllers.

CONSTITUTION: Trenches 3 are provided in a quartz plate 1b side while gas blowing-off ports 2a, 2b are arranged on the reacting position of the quartz plate 1a. Besides, these quartz plates 1a, 1b are fixed by a quartz fixing jig 4. Material gasses are fed from gas feeding sources respectively and independently through the gas feed pipes 5a, 5b. At this time, the space given to the quartz plate fixing jig 4 to introduce the gasses is partitioned off not to make them mix with one another. Accordingly, the gasses will not mix with one another in the title planar gas feeder flowing independently to be mixed with one another for the first time only after they are blown out of the blowing ports 2a, 2b. Through these procedures, the films can be evenly formed in a large area even if highly reactive gas sources are used.

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